

REMARKS

Claims 1-29 are pending.

The applicants appreciate the indication that claims 3-11, 14-22, and 25-26 are directed to allowable subject matter. These claims are not be placed in independent form because the applicants respectfully submit that the independent claims from which they depend are in condition for allowance as explained in more detail below.

In the previous amendment filed on September 29, 2005, the applicants pointed out that the prior art did not teach or suggest computation stages that employ two different levels of computation precision, which as known in the art, refers to the number of bits used to represent a value (remarks repeated below for the Examiner's convenience). The Examiner disagreed, stating that "precision" can also be defined as "Of or characterized by an accurate action."

The applicants disagree because the definition of "precision" provided by the Examiner is not a reasonable definition of "computation precision" to one of ordinary skill in the art. The Examiner's definition is from a general dictionary, which may reflect a meaning of "precision" out of the context of the relevant art. In the relevant computing art, "precision" certainly does not have the meaning given in the Examiner's general dictionary. As shown in the attached Microsoft dictionary, the computing art defines "precision" as the number of bits used to represent a value. This definition is supported by the applicants specification, which repeatedly refers to "precision" in the context of the number of bits being used to represent a value (e.g., page 2, lines 18-24; page 3, lines 1-8 and 8-30; page 4, lines 6-12; page 15, lines 1-7). In addition, the prior art cited by the Examiner (i.e., Muwafi), also uses "precision" to refer to the number of bits used to represent a value (e.g., col. 1, lines 6-15; col. 3, lines 56-67).

The applicants respectfully submit that the Examiner employed an incorrect legal standard in interpreting the "precision" language of the claims. The Examiner indicated that, in relying on the definition in the general dictionary, he was "reading the claims as broadly as possible." That is not the correct legal standard for claim interpretation. Instead, the Examiner is entitled to use the broadest reasonable interpretation consistent with the interpretation that those skilled in the art would reach. See MPEP § 2111; *In re Cortright*, 165 F.3d 1353, 1359,

49 USPQ2d 1464, 1468 (Fed. Cir. 1999) (The Board's construction of the claim limitation "restore hair growth" as requiring the hair to be returned to its original state was held to be an \*\* >incorrect< interpretation of the limitation. The court held that, consistent with applicant's disclosure and the disclosure of three patents from analogous arts using the same phrase to require only some increase in hair growth, one of ordinary skill would construe "restore hair growth" to mean that the claimed method increases the amount of hair grown on the scalp, but does not necessarily produce a full head of hair.). The applicants respectfully submit that, by relying on an incorrect claim interpretation standard, the Examiner incorrectly interpreted "precision" in a manner that is not consistent with the interpretation that those skilled in the art would reach.

The following are the applicants' remarks from the amendment filed on September 29, 2005. The applicants respectfully request the Examiner to reconsider those remarks in light of the above discussion of the correct interpretation of the term "precision" in the claims.

One embodiment of the present invention is directed to a method of coding a digital audio data stream using an AC-3 encoding system implemented on a fixed point digital signal processor having plural levels of computation precision. In contrast to prior art AC-3 encoding methods, the method employs different computation precision levels for the plurality of computation phases that comprise the method. For example, the transient detection phase may use single precision (16 bit) for data and coefficients, while forward transform windowing uses single precision (16 bit) for data and double precision (32 bit) for coefficients, frequency transformation uses double precision for data and single precision for coefficients. It is important to note that the same audio data stream is subjected to both single precision and double precision computations to produce coded output data.

Claims 1-2, 12-13, and 23-24 were rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 6,208,671 to Paulos et al. ("Paulos") in view of U.S. Patent No. 5,787,025 to Muwafi et al. ("Muwafi").

Paulos and Muwafi do not teach or suggest the invention recited in claim 1, as amended. Claim 1 recites a method that includes first and second computation stages involving arithmetic operations using first and second level of computation precision, respectively. In addition, claim 1 recites that the first computation stages produces intermediate audio data and the second computation stage operates on the intermediate data to produce coded audio data.

Paulos and Muwafi do not teach or suggest such computation stages. As noted by the Examiner, Paulos discloses a sampling rate converter that converts a digital signal having a first sampling rate to a digital signal having a second sampling rate. However, such a conversion of sampling rates does not imply a change in computation precision of arithmetic operations. As is known in the art, computation precision refers to the number of bits used to represent a value (See attached definition of "precision" from the Microsoft Press Computing Dictionary). That is consistent with the use of precision in both the present application and in Muwafi. Paulos does not appear to mention any level of precision or otherwise imply a change in such precision.

Given that Paulos does not teach a change in computation precision, the combination of Paulos with Muwafi does not teach or suggest the invention recited in claim 1. Muwafi discloses an arithmetic manipulation unit (AMU) that has two operation modes: single precision mode and double precision mode. However, Muwafi does not suggest using both precision mode in a transform encoding process.. Instead, Muwafi only suggests using either single precision mode or double precision mode – not both precision modes for the same digital data. Thus, a hypothetical combination of Paulos with Muwafi would at best change sampling rates using the single precision mode or the double precision mode, but not both.

For the foregoing reasons, claims 1-2 are nonobvious in view of Paulos and Muwafi.

Although the language of claims 12-13 and 23- 24 is not identical to that of claim 1, the nonobviousness of claims 13-26 will be apparent in view of the above discussion.

New claims 27, 28, and 29 depend on claims 23, 1, and 13, respectively, and thus are nonobvious for the reasons expressed above. In addition, claims 27-29 further define the first and second levels of computation precision as involving data elements of first and second numbers of bits. As discussed above, a change in sampling rates as specified in Paulos does not

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imply a change in the number of bits of data elements involved in arithmetic operations. Accordingly, new claims 27-29 further distinguish the invention from the cited prior art.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are now clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

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Enclosure:

Postcard

Computer Dictionary Reference p. 313

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